SUMMARY OF FORESTRY STRATEGIES
IN CAT MACROECONOMIC REPORT

Reforestation/Afforestation – Target: 2.0 MMT CO2e/yr in 2020

Many acres of native forests on private ownerships in California remain below natural stocking capacity due to wildfire or other disturbance. This strategy proposes reforestation (replanting previously forested areas that have had less than 10% canopy cover for at least 10 years) of 430,000 acres over 12 years. Estimated GHG sequestration benefit is 0.5 MMT in 2010 and 2.0 MMT in 2020 for:

- 7,000 ac/yr of private lands on ownerships up to 5000 acres through CA Forestry Improvement Program for 10 years (GHG benefit of 0.35 MMT in 2020)
- 25,000 ac/yr on private lands through GHG offset market (1.52 MMT in 2020)
- 4,700 ac/yr for 12 years on state-owned land (0.11 MMT in 2020).

Implementation of above will require:

- $5 million annual budget augmentation to California Forest Improvement Program ($2 million may be available in FY 08/09, depending on Jackson State Forest revenues)
- Voluntary and regulatory markets for forestry offsets that pay $9.71 per t CO2
- $232 million, or about $19 million/year, to conduct reforestation on state lands.

Other potential mechanisms for which GHG benefits were not calculated include federal reforestation, tax credits, Bioenergy Action Plan tree cropping demo with CDFA, CEQA amendments requiring mitigation that leads to reforestation.

Forest Conservation – 0.4 average MMTCO2e/yr by 2020

Forest and woodland parcelization (development of one or more houses per 20 acres) will occur on 570,000 acres in CA between 2000 and 2020. This strategy estimates GHG benefits of past and future (2005-2013) conservation purchases that prevent emissions from vegetation conversion and allow additional growth and sequestration. Conservation of 224,000 acres would produce 0.741 MMT in 2010 and 0.05 MMT in 2020 (average annual is 0.4 MMT) from:

- Prop 84 fee title or easement purchases could conserve 140,000 acres and produce 0.725 MMT GHG benefits in 2010 and .035 MMT in 2020
- Past Prop 40/50 conservation of 84,000 acres will produce .15 MMT benefits in 2010 and 0.15 MMT in 2020.

Implementation assumptions were that at least $31.5 million for forest protection and $3.5 million from Prop 84 for oak woodland preservation would be appropriated and spent per year, starting in 2008, and that average costs would be $1400/acre.

Other potential activities include potential CEQA amendments to require more mitigation of conversion, changes in Forest Legacy Program, funds from voluntary and regulatory carbon market offsets, and future bond acts.

Forest Management – 2.35 MMT CO2e/yr in 2020

This strategy proposes forest stand management to increase carbon storage and growth. GHG benefits of 2.35 MMT were estimated for:

- Increased riparian protection through CFIP, carbon markets and tax incentives on over 1,600 ac per year (0.26 MMT in 2010 and 2020)
- Volume increases from changes in Forest Practice Act rules produces annual GHG benefits of 2.1 MMT in both 2010 and 2020.

This strategy assumed that:

- Additional state funding will be available for landowner assistance
- A cap and trade market would be established, allow offsets for forest management, and provide $20 per ton CO2.
- Protocols will be modified in a way that encourages participation by more landowners.

Winrock International determined that neither thinning nor changes in regeneration methods would produce cost-effective GHG benefits, however this may warrant additional consideration. The role of wood products in carbon sequestration could also be considered.

Fuels Management /Biomass - 2.95 MMT in 2020

Decades of fire suppression have resulted in high forest fuel loads (too many stems per acre), creating a fire hazard. Drought effects of climate change will exacerbate this. Forest fuel management projects will reduce GHG emissions from wildfire and will be used for bioenergy, producing GHG benefits from fossil fuel substitution. Fuel reduction on private and federal lands of over 6 million acres from 2005 through 2020 will produce 2.95 MMT in 2020 (.09 avoided emissions; 2.86 power and fuels) from:

- 249,000 acres through state funded programs (17,000 ac/yr from CFIP, Sierra Fuels Mgmt and other, starting 2007)
- Federal funding of 143,000 acres fuel reduction per year for a total of 2.3 million acres
- Treatment of 3.6 million acres through the Bioenergy Action Plan.

Implementation of above assumes:

- Additional state funding will be secured after final round of Prop 40 grants in FY 08/09.
- CFIP augmentation through 2020.
- Federal agencies will continue current levels of fuel reduction.
- State implementation of California Bioenergy Action Plan by Biomass Working Group and others.

Other potential mechanisms from Bioenergy Action Plan include transportation subsidies, tax credits, RPS, and reduction of barriers to sell power, some of which are moving forward. Recent FPA rule changes could also be considered.

Urban Forestry – – 0.88 MMT CO2e/yr in 2020

This strategy proposes planting 5 million trees by 2010 in urban areas statewide to sequester CO2, increase shading of buildings which will reduce energy use for cooling, and provide wood waste biomass for bioenergy, producing GHG benefits from fossil fuel substitution. This will deliver 0.88 MMTCO2e/yr at 2020 (.14 seq; .05 shade, 0.69 biomass)

Implementation will entail:

- CAL FIRE Urban Forestry programs (Propositions 12, 40 and 84) that fund up to about 800,000 acres
- Investments by local governments, NGOs and utilities in tree planting.
- Establishment of biopower facilities to utilize green urban waste.

Other actions may be required for full implementation. These include tax credits or other incentives, deployment of technologies that can convert green waste into fuels or energy, investment in new power generating facilities, enhancements to CalFire's LA Moran Nursery in Davis, adoption of an urban forestry protocol by the Climate Registry and AB, and tree planting on state properties and around state buildings.